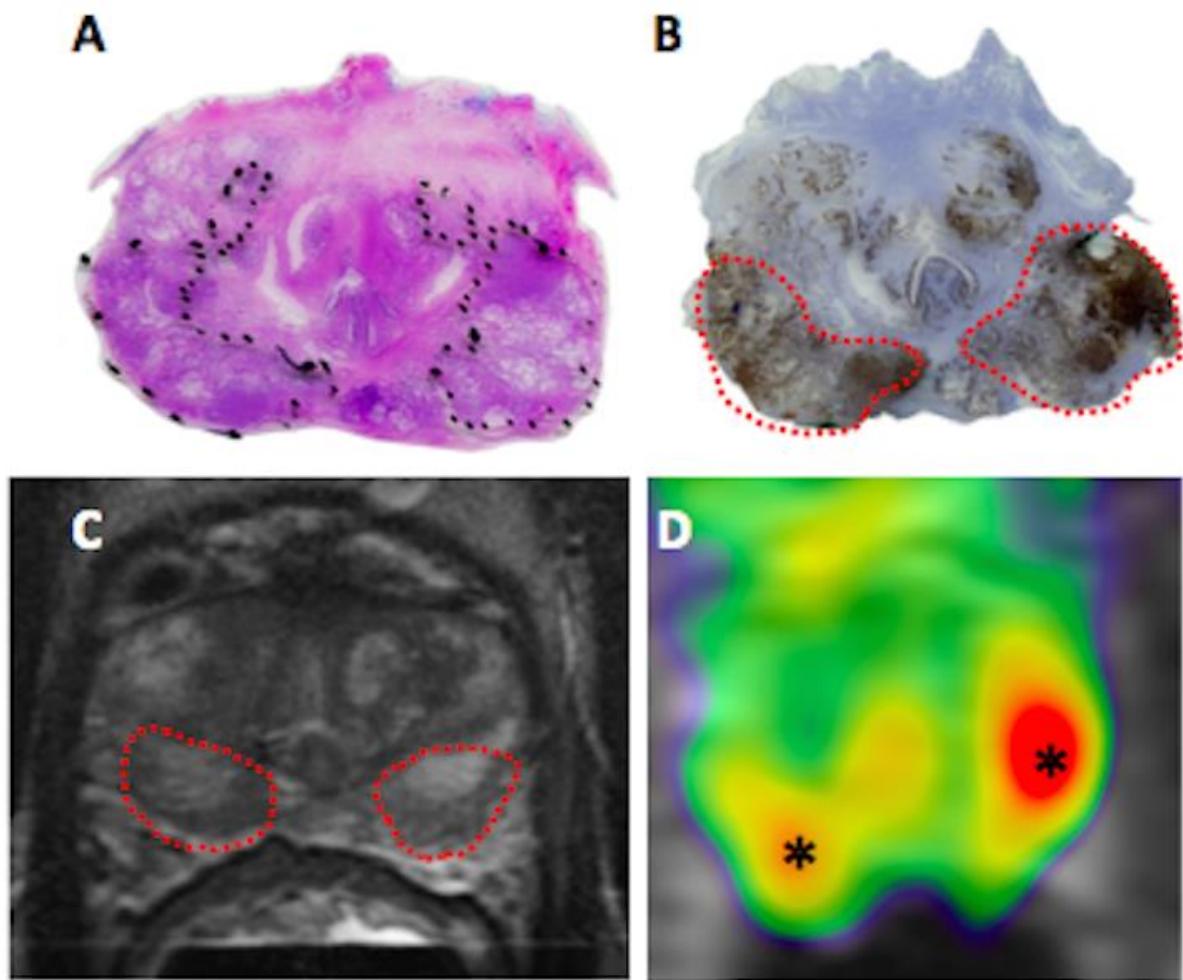
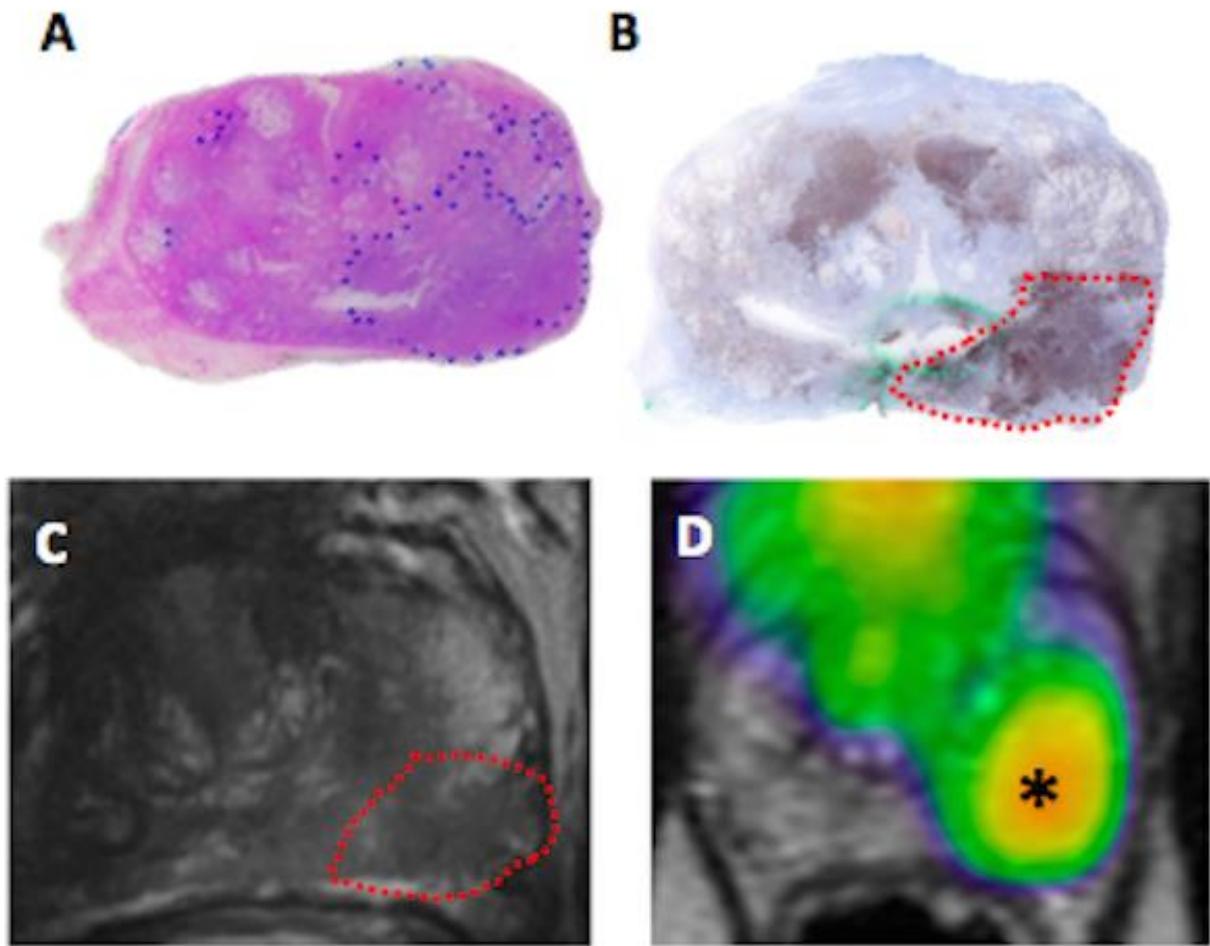


Supplemental Figure 1. Examples biopsied CTT1057 avid confirmed prostate metastases. (A) Fused CTT1057-PET with CT images from the bone biopsy from one of the cohort B patients demonstrating the needle core through the PSMA avid osseous metastasis. (B) H&E pathology section confirming metastatic prostate cancer.



Supplemental Figure 2. (A) Whole-mount H&E pathology slide, (B) immunohistology slide with PSMA-antibody and (C) axial T2-weighted imaging demonstrating bilateral Gleason 3+4 prostate cancers in the bilateral peripheral zone (dashed lines) from patient 001 - a 57-year old man with a PSA of 6 ng/mL. (D) Fused CTT1057-PET on the T2-weighted image with corresponding CTT1057 uptake in these tumors (*).



Supplemental Figure 3. (A) Whole-mount H&E pathology slide, (B) immunohistology slide with PSMA-antibody and (C) axial T2-weighted imaging demonstrating a Gleason 4+3 prostate cancer in the left peripheral zone (dashed line) from patient 004 - a 61-year old man with a PSA of 38.8 ng/mL. (D) Fused CTT1057-PET from PET5 overlaid on the T2-weighted MRI showing focal CTT1057 uptake corresponding to this tumor (*)

Supplemental Table 1. Cohort A - Demographic information, pathology and CTT1057 uptake (SUV_{max}) in the primary prostate cancers.

Pt #	Age	PSA	Final Pathology	Focal PSMA uptake?	PET1	PET2	PET3	PET4	PET5	PET6
001	57	6	Gleason 3+4	yes	5.1	5.9	4.3	*	10.7	9.6
			Gleason 3+4	yes	4.4	4.4	2.7	*	4	6
002	63	6.7	Gleason 4+3	yes	3.9	4.6	5.4	6	9.6	10.2
003	73	4	Gleason 3+4	no	5.3	4.4	3.9	4.6	4.7	3
004	61	38.7	Gleason 4+3	yes	5.1	5.2	5.9	5.4	7.3	6.9
005	67	6	Gleason 3+4	yes	6.3	5.3	8.2	8.4	8.6	12.2
			Gleason 3+4	yes	3.8	4.5	5.6	5.9	4.9	6.5

* - For patient 1, due to technical failure, the pelvic portion of the PET4 could not be reconstructed.

Supplemental Table 2. Cohort B - mCRPC Patient Characteristics

	Patient Cohort (N = 15)
Median Age (range)	68 (35 – 85)
Prior Local Treatment (%)	
Radical Prostatectomy	5 (33)
Radiation	10 (67)
Median Time Since Start of Androgen Deprivation Therapy to Scan, months (range)	46.2 (10.5 – 102.4)
Prior systemic therapy (%)	
Abiraterone	8 (53)
Enzalutamide	4 (27)
Docetaxel	4 (27)
Sipeuleucel-T	3 (20)
Median serum PSA, ng/mL (range)	49.2 (0.7 – 1238.6)

Supplemental Table 3. Normal organ uptake for CTT1057 in mCRPC patients (n=15).

Organs	Median SUV _{mean} (range)
Lacrimal	2.60 (1.66 – 7)
Parotid	3.94 (1.99 – 11.1)
Submandibular Gland	3.93 (2.36 – 7.34)
Blood pool	2.06 (0.89-3.47)
Liver	3.25 (2.14-4.07)
Kidney	8.66(3.62-13.5)
Spleen	2.86 (1.28 -3.63)
Duodenum	2.22 (1.05 – 5.1)
Bone marrow (Iliac crest)	0.75 (0.4-1.77)
Pancreas	1.54 (0.73-2.27)